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The Director of Central Intelligence

Washington, D.C. 20505

27 December 1977

The Honorable Daniel K. Inouye, Chairman
Select Committee on Intelligence
United States Senate
Washington, D.C. 20510

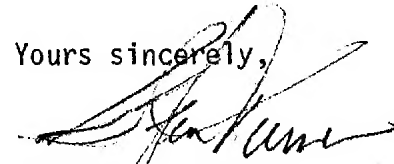
Dear Mr. Chairman:

In your Committee's report on the FY 1978 National Foreign Intelligence Program (NFIP) budget, a request was made for a series of studies to be conducted by the Community.

I am forwarding the requested report dealing with steps to be taken to improve the quality of analytic work. While this report addresses all of the points of interest outlined in the Committee's request, specific dollar figures relating to the FY 1979 NFIP budget have been omitted, pending White House approval of the budget.

On the basis of discussions with the NSC Policy Review Committee, I have directed my staff to prepare a comprehensive five-year program, as an element of the CY 1978 program development cycle, to further strengthen the quality of analytical products.

Yours sincerely,



STANSFIELD TURNER

Enclosure:
Quality of Intelligence Analysis

DOWNGRADED TO UNCLASSIFIED
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USAF, DOE, ONI, DIA, DOS review(s) completed.

USMC review(s) completed.

DIA review(s) completed

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Report
to the
Senate Select Committee on Intelligence

QUALITY OF INTELLIGENCE ANALYSIS

November 1977

Prepared by the Intelligence Community Staff, on behalf of the
Director of Central Intelligence, in cooperation with National Foreign
Intelligence Board components.

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QUALITY OF INTELLIGENCE ANALYSIS

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QUALITY OF INTELLIGENCE ANALYSIS

SUMMARY

I. Background

A. (C) This responds to the Senate Select Committee on Intelligence (SSCI) request that the DCI:

1. report on "steps to be taken to improve the quality" of national foreign intelligence analysis and production;

2. address such subjects as:

a. the balanced use of all sources of intelligence;

b. the use of outside experts and contractors;

c. the development of area specialists' programs;

d. the utilization of clandestinely acquired data;

e. the value and use of unclassified data;

f. the role of libraries and reference facilities;

g. the impact of security restrictions on access to data;

h. improving analytic techniques, both quantitative and qualitative;

i. the grade levels and promotion opportunities for analysts in each agency;

j. the role of adversary processes in improving the quality of products;

k. the role of presentational techniques; and

l. the use of products--particularly national intelligence estimates--by consumers; and

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3. treat objectives, goals and plans in sufficiently specific terms to enable the Committee to evaluate progress requested in the FY 1979 budget."

B. (U) While the Intelligence Community continues to provide a broad base of timely, relevant and high quality information, the requirement to improve our performance is a never ending one. The need for better intelligence analysis has been underscored during the course of the Revolutionary War and ever since, culminating most recently in the President's new Executive Order, "U.S. Intelligence Capabilities," to "establish policies to improve the quality of intelligence needed for national security..."

C. (U) The impressive array of planned and ongoing programmatic actions by Intelligence Community elements cited in the report demonstrates the attention and resources presently devoted to this problem. These actions have been organized around the twelve related, specific subjects highlighted in the basic SSCI request, and are the result of a review of FY 73-79 trends in the Community's analytic/production information base.

D. (U) Because we as yet lack measurement methods for assessing where, how, and to what degree these various initiatives to enhance analysis would actually be reflected in product improvement, it is exceedingly difficult to analyze the relative impact on product quality of alternative resource allocations toward that end. Nevertheless, we have set forth below certain organizational and management changes, planning and programming initiatives, and a statement of overall goals and objectives for improving the quality of analysis. This framework for more systematic efforts to grapple with this challenge is subject.

II. Organizational and Management Changes

A. (C) Several major national-level/interagency initiatives regarding the organization and management of intelligence programs are underway which should contribute ultimately to improving the quality of our analysis. Principal among these are:

1. The assignment to the NSC Policy Development Staff of the responsibility to, inter alia, "conduct periodic reviews of national foreign intelligence products, evaluate the quality of intelligence product performance, develop recommendations for ensuring high quality intelligence products, and provide guidance in areas requiring change" (Executive Order 11916, "Intelligence Activities");

2. The establishment of the DCI's National Foreign Assessment Center (NFAC) which will:

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- a. consolidate CIA's limited analytical resources to better cope with the full range of production responsibilities;
- b. provide the basis for a concerted effort to improve the national intelligence product and the analytical capabilities of the combined Directorate for Intelligence (DDI) and National Intelligence Officer (NIO) organizations;
- c. establish mechanisms to ensure the introduction of skills and knowledge outside the Intelligence Community into the production process;
- d. improve the process by which key intelligence products are reviewed; and
- e. further the interdisciplinary treatment of intelligence problems (NFAC is discussed further in Section I of the report.); and

3. The undertaking of comprehensive Intelligence Community staff-sponsored studies of (a) the Community's ADP systems; and (b) enhanced application of new analytical methodologies.

III. NFIP Budget and Planning Emphasis

25X1 A. (C) NFIP program managers have accorded a high priority in their FY 1979 budget requests to improving the quality of their analytic work, inasmuch as approximately [] of total NFIP production and production support dollars (including relevant ADP systems) pertain to actions which are perceived as furthering this goal. And the majority of the requested actions are expected to be funded. This should represent a substantial increase in effort related to improving analytic quality from FY 77-78 levels. The major portion of these FY 79 budget-related dollars is concentrated in three specific areas: (1) use of unclassified data/libraries/reference facilities (16%); (2) use of outside experts and contractors (30%); and (3) improving analytic techniques/methodologies (42%). Most NFIP production agencies have budgeted FY 79 funds for a wide range of activities in each of these three areas.

B. (C) In addition, programs are underway or planned in other areas related to analytic quality of special concern to the SSCI. The small but representative selection of these actions outlined below (in no particular priority order), serves to illustrate the diverse ways in which the Community is seeking to improve its analysis.

1. NFAC(CIA):

- a. plans in FY 79 to assign [] analysts to positions in embassies in Third World Countries from which they will do on-site reporting and analyses; and

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b. established in late 1976 a Publications and Presentation Group, one of whose responsibilities is to investigate and develop new means of presenting increasingly complex finished intelligence to a growing variety of consumers.

2. State/INR:

a. plans to continue development of a high-speed, computerized distribution and retrieval system to facilitate analysts' access to all sources of information; and

b. has a modest program underway to assign a handful of permanent officers to an embassy abroad for one-two years of field experience before returning to INR.

3. DIA:

a. is continuing the NMIC modernization program designed to provide enhanced computer support to indications and warning analysts via a near paperless environment and rapid communications capabilities; and

b. plans, in cooperation with the Military Services, an analysis of all analytical jobs in DIA and the development of selection procedures for entry level analysts, following which a comprehensive training plan for DIA analysts and more explicit guidelines for recruiters will be fashioned.

4. Army:

is forming a new Intelligence Threat and Analysis Center to consolidate limited analytical resources and provide the synergistic effects of a true multidiscipline approach to intelligence analysis within the U.S. Army.

5. Navy:

is completing a major restructuring of the Naval Intelligence Support Center's threat analysis and production effort to apply the majority of available resources toward enhanced support to the U.S. Naval weapon systems planning, development and acquisition process.

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6. Air Force:

plans to improve the Foreign Technology Division's analytic input to the worldwide Intelligence Data Handling System (IDHS) through: modifications to the IDHS general analytic capability; processing of C3 data; changes to the electronic warfare analysis capability; and development of an integrated analysis methodology for aerodynamic systems.

7. Department of Energy:

is implementing the all-source worldwide Special Nuclear Materials Tracking and Management System (STAMAS) which incorporates both classified and unclassified commercial information.

(These and other pertinent NFIP agency programs are described and discussed in Section II of the report.)

C. (C) Finally, as a result of NFIP agencies' attempts to preserve their analytical/production manpower resources while absorbing total NFIP manpower decrements, the Community's analytic/production manpower in FY 79 represents a [redacted] proportion of total NFIP manpower than in FY 78 (from [redacted] which continues a trend begun in FY 74-75. (See Section III of the report.)

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IV. Goals and Objectives

A. (U) Despite the above, however, much remains to be done to assure that our national intelligence analysis is of the highest possible quality. In particular, we need to:

1. apply even more attention to the problems of recruitment, training and career development of our analytic personnel;
2. make further improvements in our capacity to analyze complex, multidisciplinary issues and develop the data bases required to support such analyses;
3. subject NFIP agency programs for (a) external research and (b) analytical methodology development to closer Community-wide review and coordination;
4. find better ways of enhancing the man-machine interface within the Community so as to cope more effectively with the massive volume of data that our technology is providing;

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5. accelerate the development of Community-wide ADP data bases accessible to all analysts; and

6. understand better what kinds and amounts of finished intelligence are most needed by users.

B. (U) The formulation of comprehensive, explicit FY 80 NFIP program guidance incorporating the necessary next steps for achieving these goals and objectives will be a priority DCI task in the coming months.

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REPORT

I. The National Foreign Assessment Center

A. (C) CIA's Directorate for Intelligence (DDI) and the Office of the Deputy to the DCI for National Intelligence (NIO) have been merged recently into the National Foreign Assessment Center (NFAC). This has been done to facilitate meeting the DCI's responsibility for the production of national intelligence by removing artificial organizational barriers. NFAC will also provide a foundation upon which additional efforts to improve the quality of our finished products can be based.

B. (C) The merger has some well-defined purposes:

1. to consolidate our limited analytical resources to better cope with the full range of production responsibilities;

2. to provide the basis for a concerted effort to improve the national intelligence product and the analytical capabilities of the combined DDI and NIO organizations;

3. to improve mechanisms for ensuring the introduction of skills and knowledge outside the Intelligence Community into the production process (see the subsection on the use of outside experts in Section II);

4. to enhance the process by which key intelligence products are reviewed (see the subsection on the adversary process in Section II); and

5. to further the interdisciplinary treatment of intelligence problems.

C. (U) Achieving these purposes will require that we adopt some new operating styles, procedures, and organizational mechanisms. The new organization, for example, will encourage senior managers to concentrate on substantive matters and to work directly with analysts on specific intelligence problems. High priority will be given to the formulation and implementation of a planned program of production and research.

D. (C) Procedures will be developed and organizational changes made where they are required to achieve the objectives of the consolidation and the type of operations sought. An early task will be the development of procedures that will ensure:

1. program formulation and oversight with the full participation of those involved in directing the research and analysis from both the disciplinary and issue-oriented points of view;

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2. a critical review, from outset through completion, of major intelligence products that incorporates perspectives drawn from outside the Intelligence Community;

3. a systematic program to enhance the analytical capabilities for the production of national intelligence; and

4. the maintenance of close relations with those collection, processing, and R&D elements of the Community on which analytical activities rely.

E. (C) The only major organizational changes now contemplated are the merger of the Offices of the Deputy to the DCI for National Intelligence and of the Deputy Director for Intelligence, and of the National Intelligence Officers with the DDI/Center for Policy Support. These changes will result in a single front office supported by a single substantive staff for the entire organization.

F. (C) The Director of NFAC will be responsible, of course, for the full range of the Center's activities, but his primary activity will be to serve as the principal substantive alter ego of the DCI. In this capacity, he will give special attention to improving the quality of National Intelligence Estimates and other papers prepared for the senior policy community. He will work directly with the senior officers and analysts engaged in preparing these papers. He will also have immediately available to him the services of a Review Panel and outside experts for substantive review and critique of major production efforts. A discussion of how we conceive of the Review Panel is in the Section II subsection on the adversary process.

G. (C) In addition to the Review Panel, a Production Board will be established to assist in the accomplishment of NFAC's objectives. The Production Board will be the principal mechanism for shaping the focus and content of the intelligence production program. It will function as a collective body to advise the Director on all aspects of intelligence production and research. It will be chaired by the Director and its membership will include the Deputy Directors, and, when production programs within their area or subject responsibilities are being considered, production office directors and National Intelligence Officers.

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II. NFIP Agency Plans and Programmatic Actions

(C) This Section describes and discusses steps being taken by NFIP production components to improve the quality of their analytic work. It is organized around the twelve subject areas highlighted by the SSCI:

1. the balanced use of all sources of intelligence;
2. the use of outside experts and contractors;
3. the development of area specialists' programs;
4. the utilization of clandestinely acquired data;
5. the value and use of unclassified data;
6. the role of libraries and reference facilities;
7. the impact of security restrictions on access to data;
8. improving analytic techniques, both quantitative and qualitative;
9. the grade levels and promotion opportunities for analysts in each agency;
10. the role of adversary processes in improving the quality of products;
11. the role of presentational techniques; and
12. the use of products--particularly national intelligence estimates--by consumers.

(U) The Section contains:

1. a summary table of pertinent FY 1979 NFIP budget-related actions (pp. 4-8);
2. a narrative description of major actions (pp. 9-53);
3. a brief discussion of several programmatic issues related to quality of analysis improvements (pp. 54-56).

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A. Summary Table of FY-79 NFIP Quality of Analysis Budget-Related Initiatives, by SSC(I) Area

1. Balanced Use of All Sources of Intelligence

<u>AGENCY</u>	<u>ACTIVITY CENTER</u>	<u>INITIATIVE</u>
DIA	Defense Intelligence School Organizational Support	Exploitation Techniques Analyst Exchange Program
Navy	ADP Support	Improve IAIPS
Army	Threat Analysis Center	Major Consolidation; Multi-discipline Approach; All-Source Analysis Center
	Intelligence Support Detachment	
	Inscom Intelligence Group	
	Imagery Interpretation	
	Foreign Science and Technology	Science and Technology Intelligence
	Missile Intelligence Agency	Foreign Materiel Exploitation
	Medical Intelligence	All-Source Data Integration
DOE	Nuclear Proliferation	All-Source Analysis System (STAMAS)
CIA/ORD	Production R&D Analytic Methodology Support	Political Economics; Statistics Research; Deception Research

2. Use of Outside Experts and Contractors

DIA	Organizational Support Science and Technology	Consultant Hire Scientific Advisory Board External Assistance: Plutonium Production; Electronic War- fare; C ² Research and Technology Projections; Nuclear Fuel Cycle Model Development
	Defense Intelligence School Intelligence Production	Board of Visitors Estimating Industrial Economic Parameters; Economic Evaluation of Alternative Limited Nuclear Attack; Warsaw Pact Weapons Costing; Analytic Methodology Handbook; Comparative Analysis Methodology; Production Esti- mating Methodology

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	Estimates	Methodology Upgrading for Estimates
NFAC	Production	External Analysis; Consultants; Miscellaneous Contracts; Scholars in Residence
Army	Inscom/Threat Analysis Missile Intelligence Agency Medical Intelligence	Contractor Support Contractors and Outside Experts Experts for Biomedical Research
State/INR	External Research	External research analyses; Consultant Inputs; Analytical Conferences
DOE	Nuclear Proliferation	Consultant; Increase use of technical expertise in weapons laboratories; Increase use of technical expertise at Oak Ridge
CIA/ORD	Production R&D Analytic Methodology Support	Presentational Means; Management Alternatives; Deception Research; Statistics Research; Culture; Strategic and Policy Program; Political Economics; Climate

3. Development of Area Specialists' Programs

DIA	Organizational Support Intelligence Production; Estimates; Science and Technology Intelligence Production	Training Orientation Trips
		Career Ladder 25X1
CIA	Production	Establish Positions Overseas; Additional Overseas Positions; Advanced Analyst Training
Army	Foreign Area Specialists Program U.S. Army Russian Institute	Three-phase program being sustained Unique program being maintained
State/INR	Production	Assigning selected analysts to overseas posts

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4. Development of Clandestinely Acquired Data

Army	Intelligence and Security Command Foreign Science and Technology Missile Intelligence Agency	New Intensified Effort Against R&D targets Foreign Materiel Exploitation Data Exploitation
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5. Value and Use of Unclassified Data

DIA	Intelligence Production	Open Source; Handbook and Tactical Analysis Section; Federal Research Division Library of Congress
Navy	Intelligence Support Center	Federal Research Division Library of Congress
Air Force	Foreign Technology Division	Machine Translation
CIA	Production	Subscriptions; Indices and Retrieval Systems; Maps, Documents, and Books; Procurement
CIA/ORD	Production R&D Analytic Methodology Support	Presentational Means; Management Alternatives; Deception Research; Statistics Research; Culture; Strategic and Policy Program; Political Economics; Climate
Army	Document Center, Japan Opposing Force (OPFOR)	Direct Exploitation Unclassified Data for Training

6. Role of Libraries and Reference Facilities

DIA	Central Reference	Central Reference Facilities; Data Entry System; DIALog/ORBIT/ NYTimes; Microfiche
Navy	ADP Support	Automated EW Library
NSA	COINS Decision Unit	Computer Network Reference System
Air Force	Foreign Technology Division	CIRC; Materials and Technologies Studies

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CIA	See 5	
Army	USASSG ITAC Medical Intelligence Missile Intelligence	SCI Library New Reference Center Information Reference Facility Greater Use of ADP

7. Impact of Security Restrictions on Access to Data

No Identifiable Budget-Related Initiatives

8. Improving Analytical Techniques

DIA	Defense Intelligence School ADP Support Intelligence Production Management	Analysis DIA Analyst Jobs ADP; DYNAMO; DIAOLs Improvements; NMIC; AIRES
Navy	PAC Command Intelligence Support Center ADP Support	PACOM Data Systems Center New Approaches to Increasing Analytical Production Analyst Console System
NSA	Training	Analytic Training

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Production

Develop Analysis Center; Develop
Econometric Model; Price and
Production Model; Simulation of
Demand; Forecasting Economic
Trends; Soviet-Chinese Communist
Petroleum Resources; Political
Intelligence Analysis; Various
Models

CIA/ORD

Production R&D Analytic
Methodology Support

Management Alternatives; Deception
Research; Statistics Research;
Culture; Strategic and Policy
Program; Political Economics;
Climate; Presentational Means

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Army	USAICS	Intelligence Preparation of the Battlefield
	FSTC	Improving Use of ADP
	Missile Intelligence Agency	Utilization of Sensor Data
State/INR	Communications Handling	Message Handling System

9. Grade Levels and Promotion Opportunities

NSA	--	Promotion Opportunities
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10. Role of Adversary Processes in Improving Product Quality

CIA	Production	Senior Review Panel; Roster of Specialists
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11. Role of Presentation Techniques

DIA	Intelligence Production Organizational Support	Video Cassette Program Briefing Training
NFAC	Production	Update Equipment; New Methods and Equipment
CIA/ORD	Production R&D Analytic Methodology Support	Presentation Means
State/INR	Production	Automated Cartographic/Geographic Systems, etc.

12. Use of Products by Consumers

Navy	Intelligence Support Center	Provide Threat Data
Army	Production	Survey of Users
CIA/ORD	Production R&D Analytic Methodology Support	Presentation Means

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B. Narrative Description of Major NFIP Actions

1. BALANCED USE OF ALL SOURCES OF INTELLIGENCE

A. Introduction

1. (U) It is both the intent and practice of the Intelligence Community to encourage analytical elements to utilize data from as many sources as possible in the production of finished intelligence. The credibility of intelligence judgments is clearly enhanced when multiple sources can be cited in support of a particular conclusion. The Community is frequently confronted with situations where one source provides only a shell or frame circumscribing an event. In those instances, it must seek out as many additional sources of information as are available on the subject. In other cases, conflicting information alerts the Community to situations where additional study is needed. All source evaluation is, therefore, the rule rather than the exception in the production of finished national intelligence.

2. (U) Any definition of what constitutes a "balanced" use of available data depends on the nature of the intelligence problem being studied; the manner in which policymakers have phrased their demands; and the amount of time allowed for a response to those demands. The Community's system for distributing electronic and documentary data is designed to ensure that each analyst receives a timely flow of raw data on his subject area from all possible sources of information. It is an integral part of every analyst's professional responsibilities to be able to evaluate the validity and reliability of all available sources of information. In evaluating data, the analyst measures it against both his analytical requirements and his knowledge of a particular subject. Analyst-to-analyst discussions on a continuing basis also enhance the appreciation of each source. Finally, the coordination process within and between agencies reduces the likelihood that conflicting data or hypotheses, from the same or different sources, are left unexamined before an analytical judgment is made. When differences of opinion do occur, or when hindsight suggests that unsound conclusions have been reached, it is more often likely a result of faulty judgments made about the data rather than a failure to consider a source of information.

3. (U) Improvement in the quality of analysis also depends, however, on development of techniques for using all available sources of information in an optimum manner. For example, research and development on methodologies should provide analysts with new frameworks within which all sources of information can be explicitly stated. And sensitivity analyses should permit assessment of the value of additional intelligence information and, hence, the identification of the most important new collection requirements.

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B. Agency/Departmental Programs

Specific objectives, plans and actions which will be initiated, continued or completed to improve matters in this subject area are described below. Most of the steps fall into two broad categories: changes in organizational procedures; and changes in personnel management systems/training.

1. (S) Changes in Organizational Procedures:

a. As noted earlier, the Office of the Deputy to the DCI for National Intelligence (D/DCI/NI) and the Office of the Deputy Director for Intelligence (DDI/CIA) are being merged to form the National Foreign Assessment Center (NFAC). Although this merger is being made to facilitate the meeting of the DCI's responsibility for the production of national intelligence, it will also enhance NFAC's ability to promote the balanced use of all sources of information.

b. DIA, within its Intelligence Research Center, has developed focal points to monitor its all-source requirement systems and to assist the Center's analysts in stating requirements, identifying availability of sources, and sanitization and decompartmentation.

c. The State Department intends to play a more significant role in interagency activities concerned with requirements and collection coordination by concentrating on the FOCUS program (which evaluates overseas Country Team reporting) and the various collection committees that determine priorities and tasking. The State Department will also continue to utilize the NIO system as a vehicle for bringing the full range of the Community expertise and information resources to bear on policy-relevant problems.

d. The Army will continue to implement its plan for integrating HUMINT, SIGINT, PHOTINT and CI tactical assets into "Combat Electronic Warfare Intelligence" (CEWI) units. The Army is also planning to: (1) establish a Technical Indications Element within its Foreign Science and Technology Center (FSTC) and thereby encourage and expedite the exploitation of all-source data; (2) improve the Missile Intelligence Agency's (MIA) ability to receive ELINT and non-imagery IR data by establishing an INTRADA link with NSA and a teletype link with the Air Force's Foreign Technology Division (FTD); and (3) improve its management and integration of all-source intelligence by developing an All Source Analysis Center (ASAC) for its tactical elements. In addition, the US Army Intelligence

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center is being formed by the combination of the analysis and production activities in CONUS. It is a consolidation of limited analytical activities to take full advantage of the synergistic effects of a true multidiscipline intelligence analysis.

Plans to improve its intelligence analysis, and administrative support for all-source intelligence. The Integrated Automated Intelligence Processing Center (IAIPC) will also consolidate CINCLANT's intelligence activities into a single, all source, integrated center. It will include a transition to an expanded, computerized intelligence center (ICEURLANT). Additionally, the Navy plans to improve its exploitation and interpretation of time-sensitive imagery so as to improve its support to its operations. Finally, the Navy will improve IAIPS by interfacing with existing systems and incorporating new or upgraded systems.

The Corps will continue to develop its Marine Air Ground Task Force (MAGTF) system (MAGIS) designed to provide its tactical units with timely and accurate intelligence from all sources.

The JCS will develop and maintain an all-source worldwide intelligence, special operations tracking and management analysis system. It will include classified and unclassified commercial information and a special nuclear proliferation program.

Personnel Management Systems/Training:

Expand the range of data that each analyst can handle by cross-training analysts in areas outside their area of expertise.

Continue to involve selected analysts in an exchange program with NSA in an effort to acquire some enhanced intelligence activities. DIA also plans to send analysts to the Imagery Analysis Familiarization, SIGINT Analysis Familiarization and the Advanced Imagery Analysis Familiarization System.

Will increase efforts to indoctrinate analysts in the use of checking and using all sources of information to produce finished intelligence. It will also strengthen the policy of officials about the differences among intelligence sources and sensor-derived intelligence.

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d. The Army plans to ensure that analysts at MIA and FSTC receive maximum exposure to all sources of information relating to their areas of interest.

e. The Marine Corps is designating selected billets at the tactical staff levels to ensure proper access to all sources of information. The resulting shifts and modest expansion in numbers of people having such access will help assure adequate consideration of information from all available sources. These changes will also help upgrade tactical analytical capabilities and provide better trained personnel throughout the USMC intelligence system.

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2. USE OF OUTSIDE EXPERTS AND CONTRACTORS

A. Introduction

(U) The retention of outside experts and contractors is viewed by the Intelligence Community as essential. They are used to: (1) augment in-house skills and capabilities by producing substantive studies and analyses required by consumers in areas in which it is not feasible to maintain agency expertise; (2) bring outside expertise to bear on complex substantive and management problems; (3) review and critique intelligence assessments and analytical techniques; and (4) develop and test new techniques and improved means of support to the production process. The use of outside experts also permits the introduction of policy-informed perspectives to analysis, demonstrates by example ways to improve the intelligence product, permits broader dialogue on key issues, and helps to build the confidence of users.

B. Agency/Departmental Programs and Views

1. NFAC

a. (C) The DCI and/or CIA has used outside experts--both individual consultants and panels--for a number of years. They are used to advise, consult with, produce, and critique analytical components. Some of the panels are the

Conference, the Nuclear Intelligence Panel, the Scientific and Technical Advisory Panel, and the Military Economic Advisory Panel. These efforts are given high marks by those in NFAC who work with consultants. They are described as making valuable substantive contributions and providing significant means by which analysts can keep up with new developments in their fields. Moreover, the value of these panels was recently revalidated by the DCI to the President as part of an Executive Branch review of advisory committees.

b. (C) Expansion of formal consultative relationships and establishment of a number of regional and policy-issue panels with close ties to working-level analysts is planned. More use will be made of outside experts to advise and critique current and planned research; to advise on analytical technique innovations; recommend new lines of analysis; and to make NFAC analysts aware of ongoing research in academia and other parts of the private sector. In addition, a full-time Review Panel of about five nationally-recognized authorities

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will be created to review and critique important national intelligence products. This should result in better products that set new and higher standards which the entire Community can emulate. The roster of specialists available to consult on a part-time basis on special problems will also be expanded.

c. (C) The FY 1979 external analysis program is a major part of NFAC's overall attempt to strengthen analytical capabilities to meet growing demands for analyses of world resources, Soviet and Chinese energy needs, advanced technology and weapons systems, as well as other high priority matters in a more sophisticated, interdisciplinary way. Contract work to improve analytical techniques will also continue in FY 1979, with funding from NFAC.

d. (C) In addition, the scholar-in-residence program is to be expanded. In this program a university scholar works in a regular production office for a year or so. One scholar was in residence in FY 1977; NFAC hopes to have five academic researchers by FY 1979.

2. CIA/ORD

(U) Contract work will also continue in FY 79, with CIA Office of Research and Development funding. The contract funds will support the following programs: presentational means, management alternatives, deception research, culture, political economics, and climate. Contract funds will also be used in support of the Statistics Research Center and the Analytic Support Center.

3. DIA

a. (U) Although some of DIA's contracts are substantive studies and analyses that cross Service lines, primarily in science and technology, most of the effort is devoted to research and development of methodologies and software and the acquisition of hardware to improve analytical capabilities.

b. (U) DIA also has a number of experts and consultants, most of whom fall into two advisory groups: the Scientific Advisory Committee (SAC) and the Defense Intelligence School Board of Visitors. The SAC is composed of engineers and scientists from the private

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sector who provide advice on highly technical substantive intelligence matters. The Board of Visitors consists of consultants from the academic, diplomatic, and scientific communities who review the curriculum and organization of the Defense Intelligence School.

4. State Department

a. (U) The Department's Bureau of Intelligence and Research (INR) will continue to employ experts and contractors to address substantive foreign affairs questions posed by INR officers, but mostly by policy officials. This program: brings outside experts into INR on a short-term basis to assist with the design, execution, or criticism of an in-house analysis; convenes conferences in which analysts, policy customers, and external experts explore a complex situation or development in depth; commissions more extended and basic research than INR is prepared to perform in house; makes available to INR analysts, as well as to analysts and policy officials throughout the government, a wide range of external research products; and commissions projects specifically designed to develop new analytical approaches or to test the applicability of different techniques.

b. (U) The return from these efforts, in improved quality of analysis, takes several forms: through participating in the design of projects in conjunction with policy customers, analysts forge additional links and gain additional experience in this critical relationship; through helping to select contractors or consultants, analysts extend their knowledge of fellow professionals in the private sector; and through monitoring and evaluating projects, analysts sharpen their capabilities to assess the quality of analysis.

c. (U) In FY 1979, priority will be given to products of nearer term utility with little basic research being done. Most of the effort will be devoted to the newer, generally global issues.

5. Army

(C) Contractors are used by the Army to develop intelligence concepts, to provide systems descriptions, and to produce materiel-related documentation requirements. Contract work also contributes to training and combat development activities. For example, INSCOM has budgeted

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contract funds for threat analysis studies; MIA's contract base includes acquiring the use of unique test facilities not available within Government (e.g., wind tunnels and antenna ranges); and the proposed number of contractors to support MIA's biomedical research for FY 1979 has been tripled.

6. Navy

(U) In addition to regular contractual support, the Navy receives assistance from the Naval Postgraduate School and the Naval research laboratories. The laboratories help with the exploitation of recovered foreign material. The Navy also conducts an exchange program in which intelligence analysts spend a year at a Navy laboratory and laboratory personnel spend a year at the Naval Intelligence Support Center assisting in intelligence analysis and learning how intelligence can be used better in the R&D laboratories.

7. Air Force

(U) Outside experts routinely provide opinions on the significance of foreign S&T publications, review the relative status of foreign and domestic weapons technology, suggest and develop ways to improve intelligence collection and analysis, and review Air Force intelligence assessments for congruency with recent developments in their areas of expertise. Production agencies convene panels of well-known outside experts to review analytical judgments or new assessments of national interest. These panels also review and pass judgment on new analytical techniques as well as suggest solutions to management problems.

8. Department of Energy (DoE)

(C) The DoE makes extensive use in nuclear proliferation intelligence of the expertise available in DoE laboratories. In FY 1979, DoE plans to increase its use of technical expertise at nuclear weapons laboratories to evaluate and interpret nuclear weapons and nuclear explosive developments information and to use expertise at the Oak Ridge Gaseous Diffusion Plant to evaluate intelligence on foreign uranium enrichment.

NOTE: See pp 54-55 below for a further discussion of the use of outside experts and contractors.

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3. DEVELOPMENT OF AREA SPECIALISTS

A. Introduction

(C) Although the Intelligence Community has recognized the need for and the importance of area specialists, this has not been done--with the exception of Service Foreign Language Programs--to provide centralized direction and coordination to further the career objectives of analysts in a particular area, or to satisfy organizational requirements for specialists to key substantive areas.

B. Agency/Departmental Programs and Views

1. National Foreign Assessment Center

a. (U) NFAC's predecessors have established offices to develop and implement programs in response to their specific needs. This includes sending a promising analyst overseas on a Foreign Studies Program. In addition, analysts have received sabbaticals each year to pursue studies related to their area of specialization.

b. (C) NFAC recognizes that certain studies have been done in the past to sharpen analytical skills, particularly with respect to an interdisciplinary approach to studies. Steps are being taken to improve these studies. One such effort is the Advanced Foreign Language Program scheduled to begin FY 79 pending approval. This will be a 2-year program for GS-13 and GS-14 personnel with demonstrated skill in analysis and foreign language to provide for one year of academic study and one year of country work on a research project. Analysts will participate in this program each year.

c. (C) The DCI has also expressed a strong interest in placing NFAC personnel in key Third World countries. Positions in key Third World countries have been tentatively selected [redacted]

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[redacted] will be in place within a year to broaden the analysts' knowledge and improve the quality of current reporting from the scene.

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2. Defense Intelligence Agency (DIA)

a. (U) In DIA, there is no formal program designed to develop area specialists. DIA does, however, arrange for full-time academic study at selected universities; conduct in-house specialized training classes in area and functional studies; and provide for attendance at courses at the Foreign Service Institute and after hours study at local universities.

b. (U) DIA also has a modest but growing program to provide travel for selected analysts. Travel is funded as part of the overall travel budget of the affected production element. This program affords the analyst a valuable first-hand "feel" for his area as well as allowing him to speak with the authority of on-the-scene observation.

c. (U) DIA also benefits from the assignment of military officers who are foreign area specialists. The agency makes every effort to assign them internally where the use of their expertise will be maximized. In addition, DIA hires entry level professionals with top academic credentials in special areas and provides them with appropriate assignments and training to further develop their expertise. It has also succeeded in establishing six supergrade positions for highly qualified substantive area specialists. These consist of the Defense Intelligence Officers and Special Assistants to the Deputy Director for Estimates.

3. State Department

a. (U) INR has no formal program for training area and functional specialists. In recruiting new staff, whether from the Foreign Service or from outside, it tries to select only those individuals who have had considerable experience in their fields. This is not always possible, however. For selection to be effective, for example, the personnel system within the Department must give INR equal access to the FSOs already on the rolls. Tours of duty must be long enough for these officers to learn INR's ways. INR must also have the opportunity to recruit from outside the Department and the Foreign Service at favorable grade levels.

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4. Army

(U) The Army's Foreign Area Officer Specialty (FAOS) program is an advanced entry specialty program covering these functional areas: plans and operations, security assistance, attache duty, politico-military affairs, intelligence and civil-military operations. FAOS training has three phases:

Phase I: Graduate school training (1-year of area studies) and 6 months of area studies at the Army's Institute for Military Assistance;

Phase II: 6 to 12 months' language training;

Phase III: 1 to 2 years' overseas assignment in the officer's area of specialization; finally,

Phase IV: The officer travels extensively in the country of his language specialty and peripheral countries and performs extensive economic, social, and military research in those geographic areas.

b. (U) US Army Russian Institute (USARI) in Garmisch, Germany, is a special program originally developed independently of the FAOS program, but subsequently incorporated into it. Its objective is to produce area specialists who understand the USSR and its people and who are capable of formulating sound politico-military estimates concerning capabilities, limitations, and potentials of the Soviet Union and East European states. The institute program of instruction (2 years) is prepared and conducted specifically as part of the 4-year Foreign Area Officer (FAO) Program (Russian). USARI tour substitutes for a 2-year period of residence and study in the Soviet Union. Other US Government agencies have also used the institute for advanced training of selected personnel.

5. Air Force

a. (U) The Air Force's Area Specialist Program provides a valuable source of regional political-military intelligence analysts. Area specialists are becoming increasingly more important to current intelligence operations. Area specialists with in-depth knowledge of the new and underdeveloped countries play an essential role in current intelligence by providing "cultural perspective" to political analysis and military operations in third world countries.

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6. Marine Corps

(U) The Marine Corps FAO program prepares carefully selected officers for future assignment on high level Marine Corps or joint staffs in operations, planning and intelligence billets. Graduates of this program constitute a nucleus of Marine Corps area expertise with enhanced analytical capability. It is not uncommon for an FAO student (captain or major) to be assigned to a high level analytical billet after he reaches the grade of lieutenant colonel or colonel.

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4. UTILIZATION OF CLANDESTINELY ACQUIRED INFORMATION

A. Introduction

(S) The Intelligence Community relies heavily on clandestinely acquired information to provide insights into foreign policy developments, foreign intentions, future plans, and the technical strengths and weaknesses of particular programs and/or policies. In terms of actual quantity, such information represents only a small portion of the overall collection take. Its capacity to provide unique insights into intentions and basic motivations, however, is the true measure of its significance.

B. Agency/Departmental Programs and Views

1. NFAC

(S) The use of clandestinely acquired information frequently involves a more complex process than that required for other sources of information. There is, for example, the question of reliability and access of the source. Also, the protection of human sources is an extremely sensitive and vital requirement. And the use of such material in finished intelligence usually requires that stringent dissemination controls be placed on those products. There is, therefore, a tendency not to make direct use of clandestine materials in finished products when similar or corroborating information can be obtained from other sources. There are also some problems in expediting the formal release of raw reports for use in time-sensitive analyses. These matters are under present study.

2. DIA

(S) DIA uses clandestine information to gain insights foreign intentions and plans, as well as corroborate data. It also uses the information to develop alternative approaches to an intelligence question or to derive different conclusions about a given subject. It is within this context that clandestinely acquired information is indispensable. For example, DIA's Scientific and Technical Directorate has made extensive use of a file of very sensitive clandestine reports. This file has been researched on several occasions and produced significant input to a number of articles and to at least one National Intelligence Estimate.

3. State Department

(S) INR is not itself a collector of such data; it is dependent on the efforts of others to supply the information it needs. Since the Department is one of the principal end-users of such information, INR has a major stake in ensuring that State's priorities are taken into account. As a result, INR has taken several steps to improve its posture and ultimately to make possible better analysis.

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For example, it has expanded its dialogue with collection offices; intensified its participation in the FOCUS program (to evaluate overseas Country Team reporting); established an office through which it can channel its requirements for certain types of coverage; played an increasingly active role in interagency assessments of products; and started to work closely with CIA in assessing the utility of clandestine reporting.

4. Army

a. (S) During the past two years the Army's INSCOM has initiated new organizational, operational, and management efforts

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5. USE OF UNCLASSIFIED INFORMATION

A. Introduction

(U) Many intelligence publications are in some way affected by information from unclassified sources. Under certain circumstances unclassified data provide a broad framework within which classified data can be placed to arrive at accurate assessments and estimates. Historically, open sources have also provided valuable tip-off information on events and situations that are pursued by the analyst in classified sources or sensitive channels. The Foreign Broadcast Information Service and the news media are particularly valuable in this respect. There are problems, however, associated with using unclassified data. For example, the intelligence analyst must estimate how closely the data reflect actual practice. Also, only highly qualified analysts can recognize the gems in voluminous amounts of data. In this regard, the DCI's Scientific and Technological Intelligence Committee (STIC) has created a special working group to study the effectiveness of open source data collection in support of S&T analysis.

B. Agency/Departmental Programs and Views

1. NFAC

a. (C) NFAC is acutely aware of the fact that unclassified information can make a valuable contribution to the quality of its analytic effort. It also actively seeks out open sources whenever possible. Terminals for the various wire services are located in the CIA Operations Center and are monitored 24 hours a day, seven days a week. On many occasions, news of an impending crisis, such as an attempted overthrow of a foreign government or change in leadership, is received first through these services. In fact, FBIS translations are frequently the only current source of information in denied areas such as China and the Soviet Union. Analysts rely heavily on these translations for background information and to supplement their overall knowledge of developments in particular countries.

2. CIA/ORD

(C) Two major analytic projects supported by CIA/ORD

rely heavily on open sources of information. Two types of data are sought: technical

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and statistical. Technical data can be used after some validation from covert sources. Statistical information requires extensive scaling and correction from covert sources, but is nonetheless essential to these projects. The loss of open sources would critically affect the ability of these projects to continue.

3. DIA

a. (C) Unclassified data are of great value in providing general background and in many instances technical data. Unclassified materials also constitute the primary source of information in certain functional areas. For example, unclassified sources provide 60 to 70 percent of the data for transportation studies and about 50 percent of the data for biographic studies. The analysis of structural vulnerability is also dependent on unclassified data to provide information on construction technology.

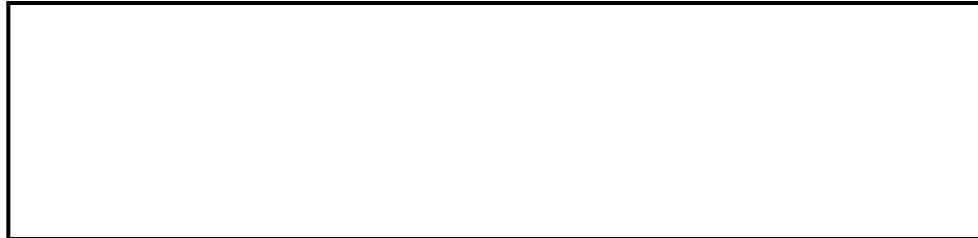
b. (C) DIA makes extensive use of the Federal Research Division of the Library of Congress. This arrangement allows DIA to exploit unclassified data available not only in the Library of Congress but also in the wealth of other libraries and research facilities in the Washington area. Through this funding arrangement, DIA has the services of a wide variety of multilingual research specialists able to sift through unclassified library data more efficiently than can its own analysts.

c. (C) Also, DIA's Handbook and Tactical Analysis Section on Warsaw Pact Ground Forces has been expanded and restructured. One major element of this Section deals exclusively with foreign language open sources.

4. State Department

(U) As a matter of routine, INR supervisors indoctrinate their analysts about the importance of unclassified sources and open references. Analysts are expected to keep abreast of such sources. Some supervisors also informally survey the Department's library holdings so as to recommend acquisitions in those fields in which it is weak. Office directors are also encouraged to give attention to requirements for open sources in much the same way as they do for intelligence collection.

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b. (C) The Opposing Force Program (OPFOR), which is being implemented in Army-wide combined arms training, is an attempt to provide soldiers and commanders with the most realistic and up-to-date knowledge of their potential adversary. Two of the more innovative features of OPFOR are the development of unclassified training literature, aids and films, and the use of actual items of Soviet materiel in training. Until recently, all training literature and information on the Soviet Army was classified and not available to the majority of the soldiers. OPFOR will be implemented on an Army-wide basis by the end of 1978. There are plans to extend the use of the OPFOR concept to selected allies and the other services.

6. Navy

(C) Naval Intelligence Support Center (NISC) is funding a sizable effort at the Library of Congress in FY 1978 to exploit Soviet R&D associated literature. The effort will be increased during FY 1979. This work will be augmented and assisted by the scientific and technical assistance of the Naval Laboratory System. After comprehensive data bases have been established in several naval-related R&D areas or fields, the quality and accuracy of NISC's long-range threat forecasts and assessments should measurably improve.

7. Air Force

a. (C) Air Force Intelligence recognized the value of using unclassified data to improve the quality of intelligence analysis in the early 1970's and instituted machine translation techniques to increase the availability of pertinent unclassified material to the Intelligence Community. Recent emphasis on the importance of technical intelligence predictions and forecasts, rather than intelligence reports of past technological achievements and designs, has prompted Air Force improvements in machine translation capabilities. The selection and translation of more pertinent Soviet and PRC literature should contribute to increasing the quality of our predictions of foreign power capabilities.

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b. (U) New sources of scientific and technical information are continually being screened and made available to analysts. Changes in the software associated with computerized data storage and retrieval systems will increase the accessibility of data and decrease the time required to respond to analyst requirements. The possibility of developing an optical printed-character reader is also being investigated. Such a device, coupled with the present Russian-English machine translation capability, could greatly reduce information dissemination time and substantially increase both the number and timeliness of translations. In addition, exploratory efforts are underway to develop a German-English and Chinese-English machine translation capability.

c. (C) FTD has budgeted for studies in FY 1979 to determine the feasibility of expanding its existing machine translation capability to serve other DoD users and to provide for further refinement of the operational S&T-related program.

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6. THE ROLE OF LIBRARIES AND REFERENCE

A. Introduction

(U) High quality analysis requires the use of both current and past information applicable to the day. To trace trends, compare present with past events, and other types of analysis, it is necessary for the Community to maintain libraries and reference facilities and to exploit similar facilities obtained by other public and private research organizations. The libraries of the Community are the result of the needed data, and the varying intervals at which the results in the requirement for library systems to index, categorize, and retrieve specific items reliably and promptly. The services of a library system assure major savings of critical resources and a more efficient and accurate storage of data.

B. Agency/Departmental Programs and Views1. CIA

a. (C) Reference functions are the Agency's research, analysis, and intelligence production efforts. The CIA Library provides services on books, periodicals, newspapers, videotapes, and information reports. The Library consists of 81,000 titles. The Library has approximately 1,700 English and foreign newspapers and journals. Unclassified information from the New York Times Information Bank, the Library of Medicine's MEDLINE, Systems Corp., and Lockheed DIALOG can be accessed through remote terminals. The Library also maintains library loans from the Library of Congress and reference facilities in the Washington area. A TWX terminal is available to facilitate library loan requests with libraries in the local area. The Agency also maintains motion picture films, videotapes, and photo negatives. The film and videotape collection is controlled by a computer-based subject system. The Agency acquires approximately 30,000 films, 2,000 films and videotapes annually.

b. (C) The Office of Geographic Research (OGCR) operates a map library. It is a common concern for the Intelligence Community. It provides more than 500,000 maps and cartographic materials a year. The Library of Congress estimated that approximately 85 percent of cartographic purchases have been made through interagency map procurement programs.

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2. DIA

a. (U) DIA library and reference services support not only DIA analysts, but also the Offices of the Secretary of Defense, the Joint Staff, Military Services, and other Defense agencies as well as the Unified and Specified Commands and non-DoD governmental activities.

b. (C) DIA recently developed an intelligence thesaurus which will provide a single entry, standardized vocabulary for modernized library operations. This single vocabulary will greatly enhance the analyst's ability to retrieve specific information. The net result will be more time to review and analyze the pertinent information. Another anticipated upgrade is a library Data Entry System which will allow information to be stored magnetically and accessed at remote indexing and cataloguing stations via cathode ray tube devices. This will significantly improve information report processing by decreasing the time required to handle field reports. And a new Microfiche Storage and Retrieval System will enhance the accuracy and efficiency of microfiche retrieval.

c. (C) The DIA library also is in the final stages of acquiring computer access to non-government data banks which will provide the analyst new fields of information. Lockheed's DIALOG System and System Development Corporation's ORBIT System will provide analysts with comprehensive data bases on research in petroleum, social sciences, agriculture, science and technology, and Congressional publications.

d. (U) In addition, DIA intends to expand its library services in the Pentagon by providing an all-source library, primarily for appropriately cleared OSD and Joint Staff personnel. DIA expects to cover the cost of necessary physical space modification out of its existing budget requests and staff the facility from existing internal resources.

3. Army

a. (C) The Army Special Security Group (USASSG) is developing a Sensitive Compartmented Information (SCI) Library located within a secure facility in the Pentagon. The USASSG SCI Library will function as the sole SCI reference facility for HQDA personnel.

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b. (C) A key objective of the Intelligence and Threat Analysis Center (ITAC) planning is the creation of a Reference Center which combines the now separate reference capabilities and resources of ITAC production elements. This center will serve the needs not only of ITAC analysts, but of other Army intelligence users as well. The ITAC Center will maintain hardcopy documents, microform material, and terminals accessing several national intelligence data bases.

c. (U) MIIA plans to expand its information reference facilities in FY 1979, including improved electronic communications between these facilities. And MIA plans to upgrade its library services and ensure more timely information input into formal intelligence retrieval systems.

4. Navy

(C) During FY 1979 the Navy intends to initiate a program to develop an automated Electronic Warfare (EW) library. The purpose of the library is to provide interactive query, report, and update capabilities in support of fleet EW requirements as well as requirements for data on foreign techniques, capabilities and characteristics.

5. Air Force

(C) Some years ago Air Force elected to centralize its intelligence source data files. FTD designed the Central Information Reference and Control (CIRC) system in 1967 and has operated it since that date. To improve the CIRC system, FTD plans to simplify computer instructional language, upgrade the central processing unit, and install terminals with faster response. FTD also plans to review more documentation and identify those items that meet expanded user information requirements. Finally, FTD plans to identify more information on materials and technologies to support requirements of engineering analysts working on specific aerospace technologies.

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7. IMPACT OF SECURITY RESTRICTIONS

A. Introduction

(U) Ready access to information derived from a multiplicity of open and covert sources is a prerequisite for both informed analysis and relevant reporting to intelligence users. In general, most area and functional analysts have access to that information which they need to perform effectively as intelligence analysts. In those instances where analytical access is limited, provisions normally exist for either gaining access to the information and/or for insuring that the sensitive information is included in at least one all-source analysis of the problem at the national level.

B. Agency/Departmental Views (Note: No specific budget-related steps which address this subject have been identified.)

1. NFAC

(C) Security restrictions pose few problems regarding access to data. Analysts hold clearances which assure them access to all but a few categories of necessarily restricted information. Analysts working on time sensitive issues occasionally experience delays in obtaining the release of compartmented information which originates in other agencies.

2. DIA

a. (C) DIA routinely seeks to produce at the lowest level of classification consistent with protection of sources and methods. DIA often produces a number of documents or briefings on a given topic each carrying more and more of the facts and findings or analysis as the classification level increases. As a result, consumers without the appropriate clearances are frequently denied the intelligence findings of the highest quality. In addition, many consumers with appropriately cleared people do not have storage facilities for compartmented data. This tends to reduce the consumer's awareness and use of the best intelligence available pertinent to his field of interest. DIA has assisted consumers in gaining access and storage authorization to sensitive data and will continue to do so.

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b. (C) There is one area where restrictions on access do have a serious impact on the intelligence analyst. Information related to U.S. actions, plans, or operations is frequently denied him. The absence of this information places the analyst in a position of attempting to report on the causes and predict the outcomes of certain events without full knowledge of essential portions of the puzzle. An uninformed Intelligence Community, not knowing behind the scenes negotiations or understandings of U.S. operations, cannot provide consumers with the highest quality intelligence. Measures to help remedy this situation are under development within the Community.

3. State Department

a. (C) Problems here relate less to the question of access to data than to other aspects of the security issue. First, the exotic classifications on some documents occasionally inhibit some analysts from using these sources. Second, security restrictions do limit distribution and thus the utility of INR studies. Third, restrictions consume an inordinate amount of the time of INR analysts, primarily because they must personally brief or deliver compartmented materials to high-level officials located in non-secure areas. Finally, the current freeze on special clearances is causing INR some embarrassment in its dealings with the policy bureaus because some officials who have a need-to-know have been unable to obtain these clearances until other officials are dropped from the list of cleared persons.

b. (C) Proposals are under study to put INR offices in a secure area so that the analysts will be closer to compartmented materials and security requirements can be observed without impinging unnecessarily on the time available for analysis. The concept of secure "vaulted" areas outside the present secure area in INR has also been examined; and the possibility of giving policy bureau officers more convenient access to the INR secure area is being considered.

4. Army

(C). A Survey Team has been visiting Army intelligence users and found a broad consensus for publication of intelligence products at the lowest possible classification level. The vast majority of Army users are

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concerned only with results of the intelligence process and would be willing to do without information concerning sources and methods in order to facilitate dissemination of intelligence products. This is particularly true of dissemination of intelligence products used for training. Users may also be willing to do without some intelligence in certain products to permit wider dissemination at a lower classification.

5. Air Force

(C) Security restrictions impact on the quality of Air Force departmental intelligence in four ways. First, if administrative costs of security could be reduced, the savings could be applied to collection and analysis. Second, special handling instructions that prohibit dissemination of data to friendly foreign governments and contractors inhibit information flow between people working on the same projects. Third, compartmentation reduces the understanding intelligence collectors and users have for each other's problems and capabilities. Finally, sanitizing certain COMINT data before the analyst reviews it increases the probability that the censor will unknowingly omit useful data and reduce the analyst's perception of the information's credibility.

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8. IMPROVING ANALYTICAL TECHNIQUES

A. Introduction

1. (U) While NFIP manpower has dwindled, or, at best, has remained constant, demands on these resources continue to increase. The analysis of new global issues involves the complex interplay of many factors that demand integration of disciplines, methods, and large amounts of information. New collection technologies and the scale of collection activities provide ever-increasing volumes of data which must be thoroughly and rapidly synthesized and interpreted in order to produce timely intelligence products. As a result, new and improved analytical techniques are needed.

2. (U) The Community also recognizes, however, that new does not always mean better. It is clear that some tried and true analytical methods will continue to meet a large portion of the Community's needs. Indeed, there is no substitute for a good, well-trained, and experienced mind. Nonetheless, all NFIB production agencies are pursuing intensive programs to research, develop, test, and apply new and improved analytical techniques. And the subject of better Community-wide coordination of such programs is under investigation.

B. Agency/Departmental Programs and Views

1. NFAC

a. (U) NFAC's efforts to improve the quality of its products are centered on enhancement of the capabilities of analysts. Part of the effort consists of providing advanced substantive training and foreign travel opportunities to improve the qualifications that analysts bring to their jobs. These efforts are now being supplemented by programs to identify new analytical methods which can be incorporated into the day-to-day activities of NFAC analysts.

b. (C) NFAC has taken a number of steps to accelerate the development and application of new analytic techniques. First, the Development Analysis Center has been established in the Office of Economic Research (OER) and tasked to identify and adapt new quantitative methods, to train personnel in the use of econometric methods, and to provide liaison with public and private sector experts. Second, the Office of Geographic and Cartographic Research (OGCR) has recently established an Environment and Resource Analysis Center to support improved analysis of key global issues such as food, population, agriculture, water, petroleum and other resources. Third, the Office of Regional and Political Analysis (ORPA) has created a division to identify non-traditional analytic techniques

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and assist analysts in their use. Among the techniques which ORPA has tested and chosen to pursue are statistics, Bayesian analysis, cross-impact analysis, gaming, Delphi, and nominal group techniques.

c. (U) A seminar program has been developed to improve analysts' understanding of the analytic process and to strengthen their capability to do high-level intelligence analysis. If the program is approved, the initial seminar--three weeks in duration--could begin in early 1978. The intent is not to teach fixed approaches as techniques, but rather to provide a framework for group discussions and individual reflection. The seminar will concentrate on four general areas: the analytic process; the objectives of finished intelligence; aids and procedures related to analysis; and coping with life as an analyst.

2. CIA/ORD

(C) The Analytic/Methodology Research Division will undertake or continue the following programs in FY 79 which are directed toward improving the quality of analysis: (a) Deception - a research program will be established to identify concepts and develop methods to aid in the detection of deception or assess the strategic implications of deception; (b) Culture Research - develop aids for analysts in interpreting and predicting the action of foreign leaders and groups by determining the role and impact of their culture value systems; (c) Political Economics - develop new methods to assess foreign resource capabilities which could have an impact on the U.S. or other free world economies; (d) Climate - develop techniques for forecasting both seasonal and long range climate which can be used to estimate the food production of foreign countries. CIA/ORD will also continue funding the Analytic Support Center which focuses on developing and applying new methodological techniques to a variety of political and strategic intelligence problems, with the thrust of the effort being multidisciplinary. And the Analytic Methodology Research Division will continue to fund and partly staff the Statistics Research Center (SRC), a technical research and consulting group established within ORD. The SRC develops and applies quantitative techniques and works closely with intelligence analysts so that the techniques can be fully implemented and used.

3. DIA

a. (C) DIA uses both in-house and contractual support to improve its analytical capabilities. In fact, a number of efforts are underway to explore the feasibility of applying several new analytical techniques to intelligence problems. Some of the more important contractually supported efforts are:

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command and control research, technological projections, nuclear fuel cycle model development, estimating industrial economic parameters from physical characteristics, aggregating and communicating uncertainty, Warsaw Pact weapons costing and military expenditures, analytical methodology handbook, comparative analysis methodology, and production estimating methodology, and production estimating methodologies.

b. (U) In the training area, an essential aspect of analytical methodology improvement, DIA is pursuing four concurrent efforts to improve the quality of analysis. First, DIA, in cooperation with the Air Force Human Resources Laboratory and the Army Research Institute, is about to undertake a project which will evaluate all analytical positions in the Agency; develop selection procedures for entry level analysts; develop a comprehensive training plan for analysts; and develop more explicit guidelines for DIA recruiters to use. Second, the Personnel Directorate has used the CIA Information Science Center to introduce intelligence production analysts and managers to new techniques for analyzing and evaluating raw data. Third, on-the-job programs are used to familiarize analysts with subjective probability assessments and available computer systems support. Finally, contractors are used to train analysts in the use of newly developed techniques.

c. (U) To coordinate its efforts in this area, DIA has established an Analytical Methodology Working Group specifically charged with developing an overall plan, seeking and disseminating new techniques, and preventing duplication or divergence of actions.

3. State Department

a. (U) INR economic analysts use standard statistical methods in conducting their research on long-range projects. The majority of INR reports, however, are not based on what most outside scholars would regard as advanced analytical techniques. There are several reasons for this situation, but the most compelling one is the fact that there is usually not enough time to employ them.

b. (U) In 1970, INR established an Analytical Methods Group to enhance analysts' knowledge of new quantitative methods and to examine their applicability to the Bureau's substantive work. This effort had an impact on the Foreign Service

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Institute's (FSI) curriculum and led to the establishment of an FSI course in Quantitative Methods. This Group also sponsored a working seminar on the use of Bayesian probability in current intelligence analysis.

c. (C) INR has also cooperated with the interagency Analytic Support Center by facilitating access to the Department's reporting and by arranging a series of interviews with participants in various international negotiations. The two Center projects in which the Bureau was directly involved were: the formulation of a "negotiation assessment" model and a research effort to assess means of enhancing the Intelligence Community's ability to evaluate the Soviet Union's perception of its need for technology from the West.

d. (U) Additionally, within the last year, the Director, INR, has appointed a Special Assistant for Research and Analysis whose function is to make the Director aware of analytical approaches drawn from the social sciences that can usefully be applied to INR analyses.

4. Army

a. (C) A new program--called Intelligence Preparation of the Battlefield--has been established to develop and standardize analytical techniques within tactical elements to increase the usefulness of the intelligence product. This effort addresses the need for detailed analysis of terrain, weather and enemy doctrine as the basis for determining enemy capabilities and courses of action within the context of standard Army battlefield scenarios.

b. (C) FSTC's computational and simulation capabilities were substantially upgraded in FY 78 by the procurement of an IBM 360/50 computer. In addition, an in-house imagery enhancement capability is scheduled for FSTC in early FY 79.

c. (U) MIA has submitted justification documents to acquire a computational support system. Anticipated payoffs are improved intelligence assessments of foreign weapon systems capabilities and weaknesses as well as more accurate assessments of future systems.

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5. Navy

a. (U) The Navy Postgraduate School has been under contract for the past two years to develop a long-range threat forecasting methodology. The methodology will be produced in textbook form; tested for a period by NISC analysts; and then refined prior to disseminating it to the Community as a whole.

b. (C) The Navy also intends to establish a PACOM Data Systems Center (PDCS) to improve intelligence quality, access, accuracy, and computer research capabilities, to permit economies, and to increase automated methodologies, particularly all-source data correlation, fusion and display. In addition, the Navy plans to develop and test new methods of increasing analyst productivity; and to develop and install specialized analyst console systems for the Ocean Surveillance Information System.

6. Marine Corps

(U) The heart of the Marine Air Ground Intelligence System (MAGIS) is the Intelligence Analysis Center (IAC). The IAC is an automated data processing tool being developed for the Marine Corps' tactical intelligence analyst. In preparation for the advent of the IAC, Naval Surface Weapons Center, Dahlgren, has provided a computerized software program which will allow Marine students to utilize actual intelligence data bases during training. Marines will receive this training at Landing Force Training Command, Atlantic, during the early as well as middle levels of their careers as intelligence analysts and analytical supervisors. The IAC simulation, and the IAC itself, are expected to significantly enhance Marine Corps analytical capabilities at the tactical level.

7. Air Force

a. (C) The Technical Applications Center upgrades its analysis equipment and methodology as new equipment and technology are identified. Foreign Technology Division has made significant improvements in its ability to analyze data in the last five years. The FTD "Modernization Program" is an improvement effort comprised of a wide range of large and small projects designed to make analysis easier and better and to present the results of the analysis in more graphic ways to an increasingly diverse audience.

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b. (S) During FY 79, for example, FTD improvements will include increased use of infrared data, improved radar data processing, more effective use of electronic and telemetry intelligence data, and increased use of laser collections. FTD has also budgeted for the equipment required to modernize its telemetry and imagery analysis capabilities. The inputs from these data sources constitute major portions of the engineering analysts' intelligence on foreign weapon systems.

8. (U) DOE

DOE has long been concerned with improving analytical techniques for the study of foreign nuclear capabilities and nuclear proliferation. In FY 1979, DOE intends to expand and improve its use of multidisciplinary analysis of potential proliferating countries by combining political, economic, and social factors with military and technical considerations in analyses of proliferation potential.

NOTES:

-- See pp. 55-56 below for a further discussion of the use of analytical techniques/methodologies.

-- A number of ADP programs are being developed to enable more efficient and effective use of analytical skills. In addition to those mentioned earlier, these include: (1) DIA's NMIC Modernization Program; (2) the DIA DYNAMO software package for computer supported simulation modeling; (3) DIA's On-Line System (DIAOLS) enhancement; (4) Air Force/FTD's improvements to IDHS; and (5) the CIA and DIA Support to Analysts' File Environment (SAFE) system. As previously noted, the Community's ADP programs are the subject of a separate IC Staff study being prepared for the SSCI.

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9. GRADE LEVELS AND PROMOTION OPPORTUNITIES

A. Introduction

(U) It is axiomatic that, without high caliber analysts, product quality will suffer. To attract and retain the best personnel, grade levels and promotion opportunities must be competitive with private industry and other segments of government. The Intelligence Community's personnel system must be flexible enough to provide adequate grade levels and promotion opportunities. Unfortunately, the Congressional mandate to reduce high grade positions (GS-13 and above) will have a negative impact on the Community's ability to retain its most competent analysts and attract first-rate entry level personnel.

B. Agency/Departmental Programs and Views

1. NFAC


a. (C) Loss of seasoned, high quality personnel to other components of the Agency, elsewhere in the government, or private industry frequently arises because of a sense of limited promotional opportunities. One of the most prevalent complaints is that there are too few opportunities for analysts to achieve senior grades without taking on supervisory responsibilities. While this is certainly true at the supergrade level, it is not from a lack of trying. Despite a number of attempts, NFAC's predecessors were unable to secure a supergrade ceiling for analysts. Grade limitations also have an adverse impact on NFAC's ability to encourage lateral entry. Over the years the number of GS-15's (with non-supervisory jobs) has increased from fewer than 10 in 1971 to 28 today. NFAC also has approximately 150 GS-14 analytical positions. Efforts are continuing to upgrade analytical positions and to push for the supergrade analyst concept.

b. (C) The basic tenet of NFAC's promotion policy is merit. The quality of performance is the primary criterion for promotions, while headroom is the basic constraint. Potential and time in grade are also relevant considerations. Median times for promotion in NFAC are as follows: GS-10 (15 months), GS-11 (13 months), GS-12 (32 months), GS-13 (37 months), GS-14 (44 months), and GS-15 (49 months).

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SECRET2. DIA

a. (C) Advancement opportunities for entry level analysts are in two grade increments, permitting promotions on the basis of performance criteria to be made from GS-7 to GS-9 and from GS-9 to GS-11 with a minimum of one year in grade. Promotion to GS-12 and GS-13 working levels is based on the complexity of job assignments. Promotion to the GS-14 and above levels for non-supervisory analyst expertise is recognized in the DIA personnel system and is borne out by the following grade structure:

<u>Grade</u>	<u>Non-Supervisory</u>	<u>Supervisory</u>
GS-16 - 18 & PL 313		
GS-15		
GS-14		

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b. (U) DIA is faced with two problems that impact on grade levels and promotion opportunities for analysts. First, DIA does not have a sufficient number of GS-16 - GS-18 and PL 313 positions to hire or promote outstanding analysts. Second, DIA is deeply concerned with the Congressionally imposed reductions in the number of civilian grades for GS-13 and above positions. These reductions will have a deleterious effect on the grade structure for analysts. Measures to achieve the reductions will necessitate imposition of a hiring and promotion freeze. This will limit replacement hiring to entry levels rather than permit the hiring of personnel with superior expertise. It will also seriously curtail career advancement opportunities for analysts.

3. State Department

a. (U) The INR analytical work force is distributed among three different personnel systems: Foreign Service, Foreign Service Reserve, and Civil Service. The grade levels of Civil Service analysts and supervisors range from GS-9 to GS-16 and are comparable with those of colleagues in other agencies. The FSO and FSR analytical positions, again including supervisors, range from FSO-7 to FSO-1. Unless the incumbents have significant supervisory responsibilities, the top grade to which they may

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normally aspire is GS-14, FSO-3 and FSR-3. FSRs and FSOs are promoted by specially constituted promotion panels which meet on an annual basis. In the Foreign Service system, rank is in the man, whereas in the Civil Service system, rank is in the position. Therefore, it is not unusual for a person to be of a higher grade than his position. Conversely, he may also be of a lower grade.

b. (U) Departmental policy dictates that all non-Foreign Service Officer positions be filled by hire through Civil Service procedures and regulations. This policy has been in effect for approximately one year. INR has been experiencing some difficulty in recruiting the kind of candidate best suited to analytical work because: the Civil Service analyst series is too broad in its definitions to capture the specialized positions important in the intelligence field; the system for qualifying potential candidates does not take into consideration the specific requirements for an analytical job, i.e., technical, language, area expertise, etc.; and there are inordinately long delays in obtaining Civil Service certifications.

c. (U) Several actions are underway to improve the analytical workforce. First, INR is endeavoring to make use of the personnel resources of other agencies, e.g., temporary assignments in INR of analysts from CIA and DoD on reimbursable details. In addition to providing analysts experienced in esoteric specialties not normally found on the Civil Service rolls, this arrangement promotes cross-fertilization between INR and other elements of the Intelligence Community. Second, INR has used affirmative action programs as a means of obtaining the services of qualified FSRs. These officers are admitted at the FSR-5 level on the basis of prior experience and their anticipated contribution to the work of the Department. Finally, INR is exploring Civil Service programs in the area of part-time and temporary employment as a means of fulfilling its requirements for area and functional specialists. The external research program also is helpful in this regard because expert consultants can be used to perform tasks for which INR may have no capability at present.

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4. Army

a. (U) Army intelligence production capabilities are adversely affected by a number of personnel policies. They include: hiring freezes; failure to obtain recognition of the high degree of skills/grade levels required by technical production activities; continuous reduction of the average grade; and reductions-in-force.

b. (U) MIA and FSTC have average grade levels of 10+ and 11+, respectively, which are below the journeyman level. INSCOM has authorizations for civilian analysts in grades GS-9 through GS-14. Upward mobility at these levels is restricted and grade limitations inevitably place these agencies in a noncompetitive position with respect to retaining analysts, scientists, and engineers, and recruiting promising applicants. Promotions above GS-13 take a skilled analyst out of production and into management. The result is often the loss of a good analyst, a manager who wants to be an analyst, or a poor manager.

5. Air Force

a. (U) With current emphasis on the reduction of the average grade and the number of high grade positions (GS-13 and above), promotion opportunities are being constricted. If continued as forecasted, promotion opportunities above the GS-12 level will be very restricted. While the need for increased intelligence competence becomes more acute, the above handicaps will make it difficult to sustain even current standards.

b. (U) Federal salaries for college graduate engineers, for example, are not competitive with private industry. The top salary the Air Force can offer these graduates is GS-7, Step 5, \$13,059 per annum. The average starting salary for graduate engineers exceeds \$14,000 per annum. To offset this disadvantage, engineers and scientists had been recruited under a career development plan that included rapid promotion. The Air Force now has a GS-12 ceiling on promotion opportunities for scientists and engineers. This will lead to an increase in the time-in-grade required for promotions to the next level. The Air Force cannot attract competent scientists and engineers under these restrictions.

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6. USMC

(U) The Marine Corps has no civilian analysts. The military grade spread of analysts ranges from corporal to lieutenant colonel. The newly created Military Occupational Specialty (MOS) for unrestricted intelligence officers will provide flexibility and control in the training and utilization of its intelligence officers. It will not only allow the Corps to upgrade the analytical capability of personnel assigned at the tactical, Joint and National levels, but also to enhance the entire intelligence effort.

7. NSA

(U) NSA has identified FY 1979 funds to specifically plan for promotion opportunities for analysts.

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10. THE ROLE OF ADVERSARY PROCESSES

A. Introduction

(U) The adversary process, when defined as independent intelligence analyses by more than one group or agency using comparable resources, can often improve the intelligence product. It is also felt by some to be a necessity when dealing in matters of critical national concern. Intelligence estimates involve subjective judgments and data interpretation. Adversary processes should help to clarify the degree of uncertainty and lead to a better understanding of how intelligence judgments are developed and how dependent they are on subjective interpretation versus factual data. The process should provide an important check and balance which ensures that positions are sound, supportable by the evidence and germane. It should also surface differences in interpretation where the supporting facts are not all that clear. This process has been used by almost every intelligence agency in one form or another for some time now.

B. Agency/Departmental Programs and Views

1. NFAC

a. (U) Since early 1977, NFAC's predecessors have been actively reviewing the desirability of institutionalizing adversary mechanisms in the intelligence production process. Senior managers have been conscious of the need to ensure that all data are rigorously examined; uncertainties clearly stated; the implications of alternative conclusions made explicit. The traditional analytic process, although containing some adversary and checking mechanisms--layers of internal review, the interagency coordination process, and some duplication of effort within the Intelligence Community--has been sharply criticized for failing to consider the range of conclusions flowing from the same data; for not bringing to bear outside perceptions and innovative methodologies; and for becoming encrusted with institutional or component biases.

b. (C) To improve the quality of products, the Director of NFAC has created a Review Panel to provide him with an independent review of major intelligence products, especially those focusing on problems that have serious policy implications. The Review Panel will serve not only as a Devil's Advocate, but will also surface alternative conclusions to best judgments and assist in identifying critical intelligence questions that merit formal alternative hypothesis analysis or competitive analysis.

c. (U) The DCI intends to maximize public dissemination of NFAC's analytic products, consonant with security needs. This will contribute to the development of an adversary process--albeit in a post-publication setting--by making a

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larger portion of NFAC's output on critical issues available to experts in the private sector for critiques and alternative analyses. Such an approach may also stimulate healthy exchanges on NFAC's methodologies and substantive findings.

2. DIA

(U) DIA uses the adversary process in several ways. Externally, interagency committees provide an excellent forum for the employment of the adversary process in developing Community findings. DIA elements participate in these and consider them to be particularly fruitful efforts. There are also a number of internal agency approaches. In some elements, organized review processes and boards exist that, in effect, constitute an adversary process where the authors must defend their work as it is exposed to close pre-publication scrutiny and sharp challenge. This process surfaces differing views and opposing interpretations of the evidence. An informal, and frequently overlooked, adversary system is that involving discussions between analysts. DIA's analysts are in constant touch with their counterparts throughout the Intelligence Community. They confer on new bits of incoming data as well as on their findings as they proceed through the analytic process. A recent case in point was DIA's differing view with CIA analysts on the Soviet oil situation.

3. State Department

a. (U) The interaction that takes place between INR analysts and policy officials is an adversary process marked by questioning and the expression of differing points of view. This in-house debate is particularly useful because it is based on a more or less continuous engagement with the problems with which the Department's policymakers are dealing. It not only gives INR analysts a sense of the questions that they ought to be focusing on, but also helps them to produce more sophisticated and policy-relevant papers.

b. (U) INR supervisors regularly engage in a form of adversary procedure with their analysts in which they seek to assure that no significant aspect of a subject has been overlooked. During the past year, INR has also made special efforts to engage embassies abroad in a dialogue by inviting their comments on drafts and finished analyses. This procedure has led to sharpened analyses and more policy-relevant papers.

c. (U) INR's External Research Program provides numerous opportunities to bring into the usual in-house adversary proceedings the analyses of outside experts. Various conferences and special meetings with outside researchers working on contract projects are especially helpful in this regard.

11. ROLE OF PRESENTATIONAL TECHNIQUES

A. Introduction

1. (U) Clearly, if intelligence findings are not communicated to the user so that he understands exactly what is meant by a given assessment, then the entire intelligence effort is for naught or, worse, may seriously mislead the user. Individual elements of the Intelligence Community are fully aware of this and have efforts underway to explore new presentational techniques. These efforts encompass a variety of approaches, from the use of new media techniques to reformatting existing reports and refocusing older techniques.

2. (U) Experimental work to date has shown that presentational techniques can improve the utility of intelligence analysis in a number of ways. First, graphic-oriented presentational formats can sharpen the analytical focus of intelligence products as they demand a precision that forces clear, concise presentations. Second, complex analytic problems can be presented in a more meaningful manner to non-experts. New presentational techniques can also provide analysts with an opportunity to organize and record large quantities of relevant background information on any given subject which consumers can review, in varying degrees of depth, at their convenience. Finally, analysts can facilitate the presentation of their evidence if they have access to media techniques that permit the liberal use of visual material.

B. Agency/Departmental Programs and Views

1. NFAC

a. (U) Until recently CIA's efforts to improve the methods of conveying the results of its analytical work have been confined largely to printed matter. New publications tailored to meet specific consumer needs have been introduced. In addition, the designs of various publications have been revised from time to time to improve their readability and appearance. During the last two years, the Agency has begun to take a systematic look at new means of presenting intelligence. For example, in late 1976, the Directorate of Intelligence established a Publications and Presentations Group which has among its responsibilities the investigation and development of new presentational means.

b. (C) Much of the initial work has been concentrated on experimenting with a videodisc system developed by the Music Corporation of America. An experimental disc produced earlier this year was sufficiently promising to justify work on a second disc. This second disc, which is nearing

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completion, will present a series of briefings on Soviet strategic military forces, short biographies on nearly 100 prominent Soviet leaders, and a catalog of hundreds of individual pieces of military equipment. In early FY 1978, plans call for the production of several 15-minute videotapes dealing with such complex subjects as the methodology for costing Soviet military expenditures, the Soviet anti-satellite missile system, and problems in analyzing the Soviet civil defense system.

c. (C) For the continuation of presentational work in FY 1979 and beyond, the DDI Publications and Presentations Group has proposed the establishment of a video center for intelligence production. The center would have four main functions: to determine the best methods for presenting finished intelligence by video; to determine the types of information that are best suited to this form of presentation; to develop a video production staff; and to provide an operational facility for the production of intelligence using videodisc, videotapes, and real-time communications.

2. CIA/ORD

(c) In 1975 the Presentational Means project OLYMPIC was established. The object of the program is to improve the communicability and timeliness of finished intelligence to high-level consumers. As a consequence of ORD studies, a Presentational Means Steering Panel representing all agency analytical, publication, distribution and research functions was established. The Panel is responsible for the oversight of R&D in the field of presentational means and the prioritizing of those efforts. OLYMPIC has been directed to explore the use of all media and to develop ways to improve the content, design and distribution methods of existing presentational means programs. A pilot program to develop intelligence TV documentaries and optical video disc programming is currently underway. Programs emphasizing advanced paper and electronic media will be undertaken in FY 1978.

3. DIA

a. (C) The Defense Intelligence Officers recently developed a product designed for a few of the highest DoD officials. This publication has now been transformed and broadened in scope to meet the needs of the new administration. DIA's current intelligence element has also developed a Weekly Watch list to meet the needs of the Joint Staff. This list is designed to ensure interaction between

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DIA production elements and the Joint Staff consumers. The Military Services desire for a single daily current intelligence publication led to the development of the Defense Intelligence Summary.

b. (C) In addition to tailoring its products to the user, DIA has taken internal initiatives to enhance the receptivity of data. Its Research Center has, for example, restructured all products to provide a measure of commonality in numerical identifiers, nomenclature, and organization that will result in the user's finding it easier to locate a specific publication and, within it, the type data he desires. Another initiative is the use of video-cassettes. The Current Intelligence Directorate distributes cassettes to 72 consumers. This includes the White House Situation Room which uses the tapes to brief the NSC and the NSC Staff. The video-cassette program has passed the pilot stage and is maturing into a standard element within the array of briefings, hard copy, and messages that comprise DIA's multi-media communication capability. DIA intends to expand the video-cassette program in order to enhance the user's understanding of DIA, its products, and how to acquire them.

c. (U) Last year in an effort to fine tune its communications with the consumer, DIA began to include numeric expressions of subjective probability in selected publications and briefings. The intent is to more precisely state the intelligence analyst's evaluation and avoid confusion over such words as "possible," "probable," "likely," etc. Reaction from DoD consumers has been quite good and DIA will continue the system.

3. State Department

a. (U) INR has long been aware of the value of graphics as important tools in intelligence analysis. Until very recently, however, INR had a very limited capacity to design, compile, and draft maps and charts. Most maps and charts had to be commissioned through another agency. As a result, INR had to limit its use of specially made maps and charts largely to reports that were not time-sensitive.

b. (U) In producing maps, charts, and diagrams for departmental use, INR has continued to rely upon traditional methodologies: manuscript compilation and drafting. Most of INR's maps are printed in black and white owing to charter restrictions placed on the Department's Publishing and Reproduction Division. At the present time, the Department is

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unable to produce multicolored, carefully registered maps rapidly. During the current fiscal year, however, INR will obtain an automated cartographic/graphic system for the compilation and drafting of maps. The system comprises a digitizer, a computer, a control unit, and a vertical plotter, and will provide INR with a capability to produce certain kinds of maps and graphics for Departmental use that it could not do before.

4. Air Force

(U) FTD is using its computers to generate visual aids for studies and briefings and to prepare messages that disseminate technical intelligence information to a variety of addressees. Selected briefings are recorded on videotape and viewed when and where they are needed.

5. Army

(C) Army intelligence presentations over the past year have had significant impact on the U.S. Army in many areas. S&T presentations have been particularly valuable and include such items as: Soviet Radio-Electronic Combat, Warsaw Chemical Warfare capability, Soviet Assault Helicopter developments, and the new Soviet Medium Tank. The Chemical Warfare briefing was presented to top-level Army and Defense personnel and to Congressional elements. This briefing is believed to have been an important factor in the decision to reconstitute the Army Chemical Corps.

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12. IMPROVING PRODUCT UTILITY

A. Introduction

1. (U) Nothing so inspires an analyst to write the best possible paper as the knowledge that a high-level policy official has requested it and is pressing for its earliest completion. Nothing so encourages an analyst as the knowledge that a policy official has used his paper. If all papers were requested, there would be few problems, but many papers are self-initiated on the ground that a policy official would benefit from an analysis of a certain subject even though he has not asked for it. The challenge is to prepare a paper that will throw light on policy process at the point where it can be most helpful.

2. (U) Improving product utility is a major objective of the Intelligence Community. Our ability to realize this objective, however, is directly related to how effectively we achieve our other goals with respect to improving the quality of analysis. It is also dependent on a fuller understanding of precisely what kinds and amounts of finished intelligence are most needed by users.

B. Agency/Departmental Programs and Views

1. NFAC

a. (U) The Director of NFAC has indicated that he will take a personal interest in improving the quality of National Intelligence Estimates (NIEs) and other papers prepared for the senior policy community. He intends to work directly with the senior officials and analysts engaged in the preparation of these products. A new Review Panel will also provide the Director with an independent review of NIEs and other major intelligence products.

b. (U) Even before the merger of the DDI and NIO, Agency officials made a comprehensive review of the role of National Intelligence Estimates, looking toward improving the products and making them more useful. The findings were published in the monograph "National Estimates: An Assessment of the Product and the Process" in April 1977 by the Agency's Center for the Study of Intelligence.

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to ascertain the consumer's evaluation of DIA at a number of levels in a variety of products. DIA copy products carry a tear-out evaluation which is not nearly 100% effective, this type of evaluation is a reaction to the specific publication. DIA is also involved by the production elements in planning DIA products. DIA also includes the names of the publications. Interested consumers can contact DIA analysts to clarify or inquire about additional information. DIA analyst an understanding of the use of DIA products. DIA also specifically designed consumer surveys.

DIA has a specifically designed informal system of contacts with consumers at all levels. The Defense Intelligence Agency directors, middle managers, and analysts, through their contacts, attempt to ascertain the consumer's evaluation of DIA products. These contacts are maintained through DIA. It is often through these contacts that new and new tasks levied on DIA to meet the

DIA maintains close working relationships with the State Department. For this reason, DIA is able to obtain intelligence analysts in other agencies who know what the consumer wants--are less likely to be IIR analysts. The fact that a substantial analytical work force consists of FSOs at overseas posts also helps to keep DIA in touch with consumers' needs. There is always a strong producer-consumer relationship.

DIA is uniquely well placed to seek improvements in its own studies and of interagency estimates. DIA's proximity to and close relationship with the State Department. Toward this end, DIA stressed the necessity of ensuring that its studies are descriptive, historical, and analytical. DIA encourages developments for US intelligence. DIA encourages the question, "So what;" (2) encouraged DIA analysts to meet these criteria in their studies. (3) DIA sought to ensure that interagency studies focused on issues of concern to

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policy officials by drafting terms of reference with care and by soliciting the advice of principal end-users at the beginning of the estimative process.

4. Army

a. (U) The Army is conducting a survey of its intelligence users to determine how intelligence products are used and how they can be made more responsive to user needs. The survey is being made by a team which is visiting organizations representative of the entire spectrum of Army intelligence user interests.

b. (C) Scientific and Technical Intelligence (S&TI) is used to develop threat papers for the development cycle of US ground force material to assure best possible performance against likely adversaries. S&TI is also utilized to bring to the attention of US developers foreign techniques and designs which may be useful in the production of US material. FSTC cooperated in a program initiated by DoD/CIA to track the use of covertly acquired HUMINT to the ultimate user in the R&D community. Studies prepared by FSTC using such material were tracked to Aviation Command, Dugway Proving Ground, Electronics Command, and Tank and Automotive Command where the usefulness of these studies was confirmed.

5. Navy

a. (C) The Office of Naval Intelligence recently reviewed the quality of its S&TI analysis and the applicability of its products to major consumers. As a result of this self-analysis, the Naval Intelligence Support Center has been restructured to apply the majority of its analytical resources toward providing threat support to the naval weapons systems planning, development and acquisition process.

b. (C) In the process of establishing a new relationship between intelligence elements and weapons developers, the Navy had discovered that one of the best methods of improving the responsiveness of intelligence is to issue service-wide instructions which make the consumer request specific intelligence support for projects and programs. To insure that the consumer uses the intelligence, the Navy has developed a system for checking on its use during the Navy and DoD acquisition review processes. The purpose of the reorientation is to provide current threat data and forecasts to consumers in weapons development and acquisition programs. This effort provides tailored-threat assessments specifically designed to support R&D and systems development projects.

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c. (U) After establishing a closer relationship with its Material Community, Naval Intelligence now finds itself analyzing intelligence which did not previously receive much emphasis. Current intelligence has always occupied most of the attention of intelligence analysts. The problem is that weapons system developers do not especially need current intelligence. They need information on the threat at some time in the future. To provide this information, Naval Intelligence is now engaged in making long-range threat forecasts.

6. Air Force

(U) Intelligence products and, in particular, National Intelligence Estimates (NIEs) are widely used in supporting the Air Staff. They also provide intelligence throughout the Air Force because a significant amount of information in NIEs is used in the Defense Intelligence Projections for Planning (DIPP). Other intelligence products are also used in planning tactics, designing modifications to existing systems, and in the design phase of new systems.

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C. Discussion

(C) The large efforts noted above in (1) the use of outside experts and contractors, and (2) analytical technique development--accounting for approximately 72% of NFIP requested funds for quality of analysis improvements--raise some programmatic concerns.

1. (C) Outside Experts and Contractors

Intelligence agencies and program managers have identified a large amount of FY 1979 resources for the use of outside experts and contractors to improve the quality of analysis. While the Community has been criticized for being insular and assuredly benefits from increased dialogue with outside experts, the magnitude of these efforts raises several issues:

a. Since at least some of the external research funds are also for contractual development and testing of improved and new analytical methodologies (discussed below), there is probably some double accounting of funds in these categories.

b. Some agencies identify their entire external research contract program as contributing to improvement in the quality of analysis, while other agencies selectively identify only a part of the external research as making such a contribution. In the future, agencies should define the external research efforts that are expected to make improvements in the quality of the intelligence product and the precise nature of the anticipated improvement.

c. Outside experts and contractors probably make the most direct impact on the quality of analysis by reviewing and critiquing intelligence products and advising agencies on analytic problems. Examples of this type of action are: NFAC's forming of a Review Panel of outside authorities to review and critique national intelligence products; NFAC's proposed expansion of its scholar-in-residence programs, which will bring more outside experts into the analytical process; INR's contracting with a wide range of academic experts to participate in analytical conferences; and various agencies' retention under contract of consultants to serve in advisory panels and boards. More initiatives of this type should be taken, and existing efforts should be selectively expanded.

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d. The external research programs, since they enable the agencies to augment their in-house skills and capabilities and to produce important products that otherwise would not be possible, can indirectly contribute to improve product quality. They help agencies meet consumer demand and in many cases they provide prototype products which the agencies can later replicate internally. External assistance of this type should be reviewed to identify the skills and capabilities that are chronically in short supply and to reexamine the agencies' recruitment programs and use of available manpower resources.

e. The total Community external research program involves substantial costs. It may also require better coordination to: (1) avoid undesirable duplication; (2) ensure the accommodation of the needs of other agencies in contracted research by providing for mutual visibility of contract programs among agencies; and (3) ensure that research results are transferred to all agencies who can use them. In this regard, it should be noted that State/INR has been charged by a memorandum from Dr. Brzezinski of 27 April 1977 to chair an interagency committee, involving virtually all Executive Branch departments and agencies--including CIA and DoD--for the coordination of external research on foreign affairs. This group has the advantage of keeping a broad range of consuming, funding, and producing agencies informed about government-supported research of cross-agency interest. However, as various elements of the Intelligence Community expand their use of external experts and contractors, it may be desirable to supplement the work of this government-wide group with that of a more specialized sub-group. In such a group, a greater number of analytical production units could be represented for the more effective coordination of the external research they support for the purposes of advancing both substantive production and analytical methodologies.

2. (C) Analytical Technique Development

The large effort devoted to analytical technique development suggests that there is a need for future Community-wide review and analysis of this type of program, also. The reasons are:

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a. A high proportion of the effort is devoted to the development and acquisition of ADP software and hardware. By improving computer support to analysis, these efforts are intended to improve the analysts' working environment and efficiency. However, these programs should be subject to Community oversight along with other ADP programs.

b. It remains to be determined whether concentration of so much funding on this type of initiative rather than others, such as improved selection and training of analysts, is an optimal allocation of funds.

c. Although methodological research has uncertain payoff (a characteristic of most research), efforts to develop new approaches and techniques should be encouraged. Mechanisms should be established, however, to provide rigorous evaluation and validation of them and to foster the adoption of effective new or improved methods.

d. At present, only CIA has the organizational infrastructure to manage the R&D of methodologies and to facilitate their application in intelligence analysis and reporting. Other agencies should be encouraged to create such organizations, or CIA should be authorized to provide a service of common concern.

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III. Trends in NFIP Analytic/Production Manpower

A. (C) This section consists of graphs which portray trends in:

1. Overall FY 73-79 NFIP analytic/production manpower strength by agency/program;
2. Overall FY 73-79 NFIP agency/program analytic and production manpower as a proportion of total NFIP manpower; and
3. FY 73-79 NFIP agency/program analytic and production manpower applied to the USSR area.

The data have been derived from the DCI's Consolidated Intelligence Resources Information System (CIRIS). The figures represent Intelligence Community resources for "evaluation, analysis, collation, correlation and synthesis of information into end products." The Consolidated Cryptologic Program (CCP) figures include resources for "analysis, collation and correlation of SIGINT information" (plus, unavoidably, resources for "dissemination and presentation of intelligence information to intelligence producers and other consumers").

B. (U) It is important to note that the graphs do not:

1. Reflect actual manpower allocations, since all CIRIS data represent (merely) manpower authorizations/planning estimates;
2. Reconcile acknowledged shortfalls in the quality of agency data submissions to CIRIS over the years; or
3. Distinguish categories of "analyst" or "producer" by job skill (e.g., national intelligence production, photointerpretation, crypto-linguistic processing), grade level, full or part-time responsibilities, etc.

C. (S) With these limitations in mind, the figures show, among other things, the following basic changes between FY 78 and FY 79:

1. A very slight overall increase in total NFIP production manpower [redacted], counterbalanced by a larger decrease in total CCP analysis and reporting manpower (from [redacted])

25X1

2. A slight increase in the proportion of total NFIP manpower devoted to analysis/production (from approximately [redacted] percent to approximately [redacted]) which continues a trend begun in FY 74-75.

25X1
25X1

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3. A very small decrease in total NFIP analysis/production manpower devoted to the USSR area [redacted] practically all of which is in CCP analysis and reporting.

25X1

Notes to the attached graphs:

(1) The sharp differences in Air Force production manpower figures between FY 75-77 primarily represent USAF bookkeeping rule changes which shifted certain manpower reporting categories from "production" to "processing/support" in FY 76, and vice versa in FY 77.

(2) The CIA's decline in manpower applied to the USSR area beginning in FY 75 represents increased use of the "world" area target versus a specific country in its CIRIS reporting submissions.

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